



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,361	02/27/2004	Hironobu Machida	036741-0130	7946
22428	7590	09/15/2009		
FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			EXAMINER RILEY, MARCUS T	
			ART UNIT 2625	PAPER NUMBER
			MAIL DATE 09/15/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/787,361	<b>Applicant(s)</b> MACHIDA ET AL.	
	<b>Examiner</b> MARCUS T. RILEY	<b>Art Unit</b> 2625	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 1-13, 15, 16 & 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14, 17 and 19-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____.                                     |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/27/2004; 12/18/2007; 09/30/2008</u> .                      | 6) <input type="checkbox"/> Other: _____.                         |



## DETAILED ACTION

### *Response to Amendment*

1. This office action is responsive to applicant's remarks received on June 3, 2009. **Claims 14, 17 & 19-37** remain pending and **claims 1-13, 15, 16 & 18** have been cancelled.

### *Response to Arguments*

2. Applicant's arguments with respect to amended **claims 14 & 19-21** filed on June 3, 2009 have been fully considered but they are not persuasive.

### *A: Applicant's Remarks*

For Applicant's remarks see "*Applicant Arguments/Remarks Made in an Amendment*" see filed June 3, 2009.

### *A: Examiner's Response*

Applicant argues that Ote '506 either alone or in combination with Matsuzaki '476, Ronning '647, Ashizaki '500, Gormish '362 and Minigawa '346 does not disclose, teach or suggest display means for displaying an image on a screen so as to prompt a user to input a key a plurality of times. Applicant also argues that the cited references do not describe nor suggest that the key value is set as an encryption key when the same encryption key is inputted a plurality of times and after the input key value of M digits are divided and when the key value of the part of

Art Unit: 2625

the N digits is inputted, the part of the key value of the N digits is converted to a form having no specific meaning.

Examiner understands Applicant's arguments but respectfully disagree. Ote '506 discloses display means for displaying an image on a screen so as to prompt a user to input a key a plurality of times. Examiner relies on Fig. 2, #5 and column 5, lines 5-15 of Ote '506. Fig. 2, #5 shows a Display device wherein the user can select unencrypted files 1090 stored in the encrypted file area 1080 out of the list displayed in the form of unencrypted file names. A user may select as many files he chooses out of the list displayed. Thus, Ote '506 discloses, teach or suggest this limitation. Moreover, Ote '506 describes or suggests that the key value is set as an encryption key when the same encryption key is inputted a plurality of times and after the input key value of M digits are divided and when the key value of the part of the N digits is inputted, the part of the key value of the N digits is converted to a form having no specific meaning. Examiner relies on Ote '506 at column 2, line 65 thru column 3 line 3 and column 6, lines 4-30. Here, Ote' 506 displays a list of encrypted files 1090 stored in the encrypted file area 1080 in the form of unencrypted file name. Thus, the key value has no specific meaning. The automatic encryption key generation means automatically generates the encryption key on the basis of the authentication password inputted by the user in order to access the encryption folder. A list of encrypted files are displayed and are automatically converted by the conversion means. The unencrypted files are also converted by the conversion means 1220. It is understood and interpreted by the Examiner that the conversion means includes dividing the key value of the arbitrary digits M & N. Thus, Ote '506 discloses, teach or suggest this limitation. Therefore,

Art Unit: 2625

independent claim 14 is not patentably distinguishable over the combined teachings of Ote '506, Matsuzaki '476 and Ronning '647.

Independent claims 19, 20 & 21 contain substantially similar features as that of apparatus claim 14. Thus, claim 19, 20 & 21 are rejected on the same ground as claim 14.

As a result, Applicant's application is not in condition for allowance.

### **Claim Objections**

*(The previous claim objections are withdrawn in light of the applicant's amendments.)*

### **Claim Rejections - 35 USC § 103**

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 14, 19-23, 26, 27, 30, 31, 34 & 35** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ote (US 6,023,506 hereinafter, Ote '506) in combination with Matsuzaki et al. (US 6,058,476 hereinafter, Matsuzaki '476) as applied to claim 14 above, and further in view of Ronning (US 5,903,647 hereinafter, Ronning '647).

**Regarding claim 14;** Ote '506 discloses an image forming apparatus for forming an image based on input image data, the image forming apparatus comprising (See Figure 1 for a Block diagram of the image forming apparatus):

Art Unit: 2625

image storage means (See Figure 2 where #'s 2, 3 & 4) for storing the input image data (See Figure 2 where #'s 2, 3 & 4 are the ROM, RAM and storage disk respectively).

display means (Fig. 2, #5 Display) for displaying an image on a screen so as to prompt a user to input a key a plurality of times (See Fig. 2, #5 Display. See also column 5, lines 5-15 and column 2, line 65 thru column 3 line 3).

wherein the display means displays the key value captured by the input means, and converts an input key value into a form having no specific meaning ("*...and displays a list of encrypted files 1090 stored in the encrypted file area 1080 in the form of unencrypted file name.*" column 6, lines 9-12).

wherein the display means divides the key value of M digits by N digits basis (M being greater than N, and N not being equal to zero), and converts a part of the key value of the N digits into a form having no specific meaning as soon as the inputting of the key value of the part of the N digits is completed (See column 6, lines 4-30. Here, a list of encrypted files are displayed and are automatically converted by the conversion means. The unencrypted files are also converted by the conversion means 1220. It is understood and interpreted by the Examiner that the conversion means includes dividing the key value of the arbitrary digits M & N).

Ote '506 does not expressly disclose input means for capturing a key value of an encryption key input by a user during the setting of the encryption key; key value determining means for determining whether key values input by the user by a predetermined number of times match each other.

Matsuzaki '476 discloses input means (Fig. 3 Step #11) for capturing a key value of an encryption key input by a user during the setting of the encryption key ("*In FIG. 3 step (11), the E function 67 uses data transfer key K stored in data transfer key K storage unit 70 to encrypt digital copyrighted material inputted through external I/F unit 61 and switch 65. The result Cj is outputted to second device 52 through switch 68 and external I/F unit 61.*" column 15, lines 3-7);

Art Unit: 2625

key value determining means (Fig. 1, #11, First Device) for determining whether key values input by the user by a predetermined number of times match each other (*"First device 11 compares the decryption result RR1 with the random number R1 temporarily stored inside first device 11. If they match, first device 11 considers second device 12 to be in possession of the same authentication key S, and confirms the entity in communication as a legitimate device. However if they do not match, then it judges the entity in communication an unauthorized device and terminates the process."* column 2, lines 49-56).

Ote '506 and Matsuzaki '476 are combinable because they are from same field of endeavor of encryption devices (Matsuzaki '476 at column 1, lines 7-11).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the encryption device as taught by Ote '506 by adding input and key value determining means as taught by Matsuzaki '476. The motivation for doing so would have been because it is advantageous to protect data transmitted over communication lines from being illegally copied or altered by intercepting the line of communication. Therefore, it would have been obvious to combine Ote '506 with Matsuzaki '476 to obtain the invention as specified in claim 14.

Ote '506 as modified does not expressly disclose non-volatile storage means for storing the key value input as an encryption key if the key value determining means determines that the key values match each other; and encryption and decryption means for encrypting the image data using an encryption key prior to the storage of the input image data onto image storage means, and for decrypting the encrypted image data subsequent to the reading of the encrypted image data from the image storage means.

Ronning '647 discloses non-volatile storage means (Fig. 4b, #75) for storing the key value input as an encryption key if the key value determining means determines that the key values

Art Unit: 2625

match each other (*"The system then determines if the loaded image matches the database image (196) for security purposes. If the image does not match, the database data is rectified to that of the image (198) and the virtual volume is closed and unmounted (194) in order to maintain the application in a locked state."* column 9, lines 5-9). See also (*"An image file 77 which is the desired size of a "virtual volume" created by a software or digital information distribution system is allocated on a hard drive 75 or other non-volatile storage medium."* column 6, lines 14-18).

encryption and decryption means (*Fig. 16A, #206 & 208*) for encrypting the image data using an encryption key prior to the storage of the input image data onto image storage means, and for decrypting the encrypted image data subsequent to the reading of the encrypted image data from the image storage means (*"The system decrypts the sectors while reading them. The encryption/decryption of sector is explained with reference to FIGS. 16A and 16B. If the sectors of the application are compressed the system also decompresses the sectors while reading them."* column 8, lines 21-25).

Ote '506 and Ronning '647 are combinable because they are from same field of endeavor of encryption devices (Ronning '647 at column 2, lines 67-67).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the encryption device as taught by Ote '506 by adding non-volatile storage, input and encryption and decryption means as taught by Ronning '647. The motivation for doing so would have been in order to prevent unauthorized copying of the software program or other digital information. Therefore, it would have been obvious to combine Ote '506 with Ronning '647 to obtain the invention as specified in claim 14.

**Regarding claim 19, 20 & 21;** Independent claims 19, 20 & 21 contains substantially similar features as that of apparatus claim 14. Thus, claim 19, 20 & 21 are rejected on the same ground as claim 14.

Art Unit: 2625

**Regarding claim 22;** Ote '506 discloses wherein the image storage means corresponds to a hard disk drive (See Figure 4, #4 wherein #4 is a disk ("*Each control program implementing the present invention is stored beforehand on the disk 4...*" column 4, lines 23-25).

**Regarding claim 26, 30 & 34;** Dependent claims 26, 30 & 34 contains substantially similar features as that of apparatus claim 22. Thus, claim 26, 30 & 34 are rejected on the same ground as claim 14.

**Regarding claim 23;** Ote '506 discloses wherein the display means prompts a user to enter a key at an initial setting or when the encryption key is missing ("*Upon starting the file encryption/decryption means 1000 to conduct decryption, the file encryption/decryption means 1000 conducts authentication processing by using the password 1070 with respect to a user input password, then refers to the unencrypted file /encrypted file association table 1060, and displays a list of encrypted files 1090 stored in the encrypted file area 1080 in the form of unencrypted file names. In this state, the encryption folder 1040 is open. The user can select unencrypted files 1090 stored in the encrypted file area 1080 out of the list displayed in the form of unencrypted file names.*" column 5, lines 5-15).

**Regarding claim 27, 31 & 35;** Dependent claims 27, 31 & 35 contains substantially similar features as that of apparatus claim 23. Thus, claim 27, 31 & 35 are rejected on the same ground as claim 14.

5. **Claim 24, 28, 32 & 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ote '506, Matsuzaki '476 and Ronning '647 as applied to claim 14 above, and further in view of Gormish (US 5,337,362 hereinafter, Gormish '362).

**Regarding claim 24;** Ote '506 as modified does not expressly disclose wherein one of the key values includes an error detection sign of a predetermined number of bits.

Art Unit: 2625

Gormish '362 discloses wherein one of the key values includes an error detection sign of a predetermined number of bits ("*...error detection and correction is performed (processing block 403) ... The error detection and correction processing (processing block 403) is the inverse of the error correction encoding which occurred during the encoding process (FIG. 1). The error detection and correction occurs by using the parity bits added during the encoding process of FIG. 1 to correct errors which may have occurred (processing block 403).*" column 5, lines 5-15).

Ote '506 and Gormish '362 are combinable because they are from same field of endeavor of encryption devices (Gormish '362 at column 2, lines 52-54).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the encryption device as taught by Ote '506 by adding wherein one of the key values includes an error detection sign of a predetermined number of bits as taught by Gormish '362. The motivation for doing so would have been because it is advantageous for data to remain secure. Therefore, it would have been obvious to combine Ote '506 with Gormish '362 to obtain the invention as specified in claim 14.

**Regarding claim 28, 32 & 36;** Dependent claims 28, 32 & 36 contains substantially similar features as that of apparatus claim 24. Thus, claim 28, 32 & 36 are rejected on the same ground as claim 14.

6. **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over Ote '506, Matsuzaki '476 and Ronning '647 as applied to claim 14 above, and further in view of Ashizaki et al. (US 7,024,500 hereinafter, Ashizaki '500).

**Regarding claim 17;** Ote '506 as modified does not expressly disclose where the inputting and displaying of the key value is performed in one of a decimal format and a hexadecimal format.

Art Unit: 2625

Ashizaki '500 discloses where the inputting and displaying of the key value is performed in one of a decimal format and a hexadecimal format (*"As shown in FIGS. 9 to 12, the print data specifying information is identified by a hexadecimal value of the name of an image format."* column 15, lines 4-6).

Ote '506 and Ashizaki '500 are combinable 00 because they are from same field of endeavor of encryption devices (Ashizaki '500 at column 8, lines 52-55).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the encryption device as taught by Ote '506 by adding where the inputting and displaying of the key value is performed in one of a decimal format and a hexadecimal format as taught by Ashizaki '500. The motivation for doing so would have been in order to make a the information apparatus simple, easier and more efficient for a user.. Therefore, it would have been obvious to combine Ote '506 and Ashizaki '500 to obtain the invention as specified in claim 14.

7. **Claim 25, 29, 33 & 37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ote '506, Matsuzaki '476 and Ronning '647 as applied to claim 14 above, and further in view of Minigawa '346.

**Regarding claim 25;** Ote '506 as modified does not expressly disclose wherein the image forming apparatus includes a copy mode, a print mode, and a facsimile mode, and wherein an encryption key is set for each of a copy mode, the print mode, and the facsimile mode.

Minigawa '346 discloses wherein the image forming apparatus includes a copy mode, a print mode, and a facsimile mode, and wherein an encryption key is set for each of a copy mode, the print mode, and the facsimile mode (See Figure 4 where Fig. 4 shows the encryption key for a printer *"In addition to the printers, an example of an image forming apparatus can be a scanner, a facsimile, a digital camera, and a*

Art Unit: 2625

*composite machine (multifunction peripheral device) provided with the functions of a copy machine, a printer, a facsimile, a scanner, etc....”* page 2, paragraph 0035).

Ote ‘506 and Minigawa ‘346 are combinable because they are from same field of endeavor of encryption devices (“*Print data communication with data encryption and decryption.*” Minigawa ‘346, See Title).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the encryption device as taught by Ote ‘506 by adding wherein the image forming apparatus includes a copy mode, a print mode, and a facsimile mode, and wherein an encryption key is set for each of a copy mode, the print mode, and the facsimile mode as taught by Minigawa ‘346. The motivation for doing so would have been to simply supply the user with several options of processing a document as opposed to being limited with one option such as only being able to use the facsimile. Therefore, it would have been obvious to combine Ote ‘506 and Minigawa ‘346 to obtain the invention as specified in claim 14.

**Regarding claim 29, 33 & 37;** Dependent claims 29, 33 & 37 contains substantially similar features as that of apparatus claim 25. Thus, claim 29, 33 & 37 are rejected on the same ground as claim 14.

#### **Examiner Notes**

8. The Examiner cites particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully considers the references in its entirety as potentially

Art Unit: 2625

teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or as disclosed by the Examiner.

**Conclusion**

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARCUS T. RILEY whose telephone number is (571)270-1581. The examiner can normally be reached on Monday - Friday, 7:30-5:00, est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2625

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marcus T. Riley  
Assistant Examiner  
Art Unit 2625

/MARCUS T. RILEY/  
Examiner, Art Unit 2625

/Edward L. Coles/

Supervisory Patent Examiner, Art Unit 2625